

1154AU303 FUELS TESTING LABORATORY

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1. Preamble

This course automotive fuels and lubricants enable learners to understand the properties of fuels and lubricants for the design and operation of the I.C engines.

2. Pre-requisite

NIL

3. Links to other courses

NIL

4. Course Educational Objectives

Students undergoing this course are expected to

- Understand the manufacturing of fuels and lubricants
- Understand the detailed working of fuels and lubricants
- Develop their knowledge in methods involved in testing of fuels and lubricants

5. Course outcomes

Upon the successful completion of the course, students will be able to

CO Nos.	Course Outcomes	Level of learning domain (Based on revised Bloom's)
CO1	Describe the manufacturing and refining process of fuels and lubricants	S2
CO2	List the requirements, types and classification of lubricating oils, grease and solid lubricants used in automobiles.	S2
CO3	Describe the different properties and testing procedures of fuels used in automobiles.	S2

List of Experiments

1. Study of Refining Process of Fuels and Lubricants.
2. Study of Classification of Fuels.
3. Temperature Dependence of Viscosity of Lubrication Oil by Redwood Viscometer.
4. Flash and Fire Points of Fuels/Lubricants.
5. ASME Distillation Test of Gasoline.
6. Drop Point of Grease and Mechanical Penetration in Grease.
7. Aniline Distillation Test of Gasoline.
8. Calorific Value of Liquid Fuel Using Bomb Calorimeter.
9. Reid Vapor Pressure Test.
10. Carbon Residue Test.
11. Copper Corrosion Test.
12. Cloud and Pour Point Test.

Total: 30 periods